

Energy News Overview

Environmental Protection Agency Releases Methane Regulations:

On May 12 the EPA issued the first ever regulations targeting methane emissions from oil and natural gas field production. The regulations only apply to new wells and gathering systems. Story at http://www.nytimes.com/2016/05/13/us/obama-methane-epa.html?_r=0.

Environmental Protection Agency Raises Renewable Fuel Requirement:

The EPA has struggled with setting the RFS requirements for several years and has updated its biofuel targets for 2015 – 2017. The Renewable Fuel Standard, introduced in 2005 and expanded in 2007, has encountered heavy opposition on Capitol Hill. <http://www.usnews.com/news/articles/2015/05/29/epa-raises-renewable-fuel-requirements-lowers-standards-upsets-everybody>

Army Corps Rejects Permit for Cherry Point Coal Terminal:

In a somewhat surprising ruling the US Army Corp of Engineers rejected the permit application for the Cherry Point Coal Terminal saying that it would negatively impact the treaty-protected fishing rights of the Lummi Nation. Story at <http://www.bellinghamherald.com/news/local/article76545117.html>

Carbon Dioxide Emissions From the Electric Sector Drop in 2015:

After increasing in 2013 and in 2014, energy-related carbon dioxide (CO2) emissions fell in 2015. In 2015, U.S. energy-related carbon dioxide emissions were 12% below the 2005 levels, mostly because of changes in the electric power sector. See <http://www.eia.gov/todayinenergy/detail.cfm?id=26152>

Wildfires in Alberta Leave Trail of Destruction:

Wildfires caused the evacuation of over 88,000 residents of Fort Murray Alberta, center of the extensive Canadian oil sands operations. Most oil sands operations were shut down because of the fires taking nearly 1 million barrels per day off the market. See <http://www.nytimes.com/2016/05/10/world/americas/fort-mcmurray-alberta-canada-fire.html>

Annual Energy Outlook 2016 Early Release:

The Energy Information Administration released the early version of AEO 2016 which contains the reference case forecast with and without the Clean Power Plan in effect. AEO 2016 forecasts lower energy prices in the near term relative to AEO 2015 as well as lower energy related CO2 emissions – primarily due to lower forecasts emissions from the electric power sector. <http://www.eia.gov/forecasts/aeo/er/index.cfm>

2016 Could Be the Warmest Year in the Historical Record:

El Nino is waning, but the first 4 months of 2016 have set global temperature records. La Nina is expected to show up in the fall and will eventually bring lower temperatures, but by then the probability is high that the average annual global temperature for 2016 will exceed the record set in 2015. http://www.carbonbrief.org/scientists-2016-likely-to-be-hottest-year-on-record-despite-looming-la-nina?utm_source

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Global Clean Energy Jobs Surpass Oil/Natural Gas Jobs:

Clean energy jobs rose 5% worldwide in 2015 to 8.1 million, while Oil/Natural Gas jobs declined by 18 percent. <http://www.bloomberg.com/news/articles/2016-05-25/clean-energy-jobs-surpass-oil-drilling-for-first-time-in-u-s>

Energy & Climate Video/Graphics

- EIA's Monthly Energy Review <http://www.eia.gov/totalenergy/data/monthly/>
- Short-Term Energy and Winter Fuels Outlook <http://www.eia.gov/forecasts/steo/index.cfm?src=home-b1>
- Imports of crude oil from OPEC to refining states http://www.eia.gov/beta/petroleum/imports/browser/?src=-f3#/?d=0&dt=RS&o=8&ot=OPN&v=u&vs=PET_IMPORTS.OPN_Y-US-ALL.A
- 2014 Hottest Year on Record: Global mean temperature 1880–2014 <http://www.bloomberg.com/graphics/2014-hottest-year-on-record/>
- Collapse of Oil Drilling Activity: Rig activity 2012–2015 <http://www.bloomberg.com/graphics/2015-oil-rigs/>
- Monster El Nino Makes Record-Hot Year Look Inevitable
- <http://www.bloomberg.com/news/features/2015-07-20/monster-el-ni-o-makes-record-hot-year-look-inevitable>
- EIA Oil by Rail 2010-14: EIA Energy Today <http://www.eia.gov/todayinenergy/detail.cfm?id=20592>
- Coal, Gas, Nuclear, Hydro? How Your State Generates Power <http://www.npr.org/2015/09/10/319535020/coal-gas-nuclear-hydro-how-your-state-generates-power>
- The Bloomberg Innovation Index <http://www.bloomberg.com/graphics/2015-innovative-countries/>
- How much energy do you use? <http://energy.gov/articles/how-much-do-you-consume>
- 13 States Saw CO2 Emissions go up. <http://news.nationalgeographic.com/energy/2015/11/151102-which-states-have-cut-carbon-emissions-most/>
- A Short History of Global Emissions from Fossil-Fuel Burning (1750-2010) https://www.youtube.com/watch?v=6IJ2uZSRfHI&feature=player_embedded

Energy Office and the Cascadia Rising Exercise

The Dept. of Commerce and the Energy Office continue to plan for the FEMA coordinated emergency exercise which will occur this coming June 7-10. The four-day functional exercise will be practice for a worst case earthquake scenario, which is a likely 9.0 earthquake along the Cascadia Subduction Zone and a big tsunami that follows. Emergency Operations and Coordination Centers at all levels of government and the private sector will activate to coordinate simulated field response operations both within their jurisdictions and also with neighboring communities, state EOCs, FEMA and major military commands.

Seattle Times article on Cascadia Rising exercise: <http://www.seattletimes.com/seattle-news/science/preparing-for-the-really-big-one-cascadia-earthquake-tsunami-drill/>

And on the 1700 mega quake that struck the NW: <http://www.seattletimes.com/pacific-nw-magazine/the-next-giant-quake-it-s-coming-and-heres-how/>

Energy Price Overview

Petroleum: Crude oil prices increased for the third month in a row, and are in the \$48-50 range this last week of May. Global oil demand is rising and production took a hit with the partial shutdown of the Canadian oil sands production following the extensive wildfires and evacuation of Fort McMurray Alberta.

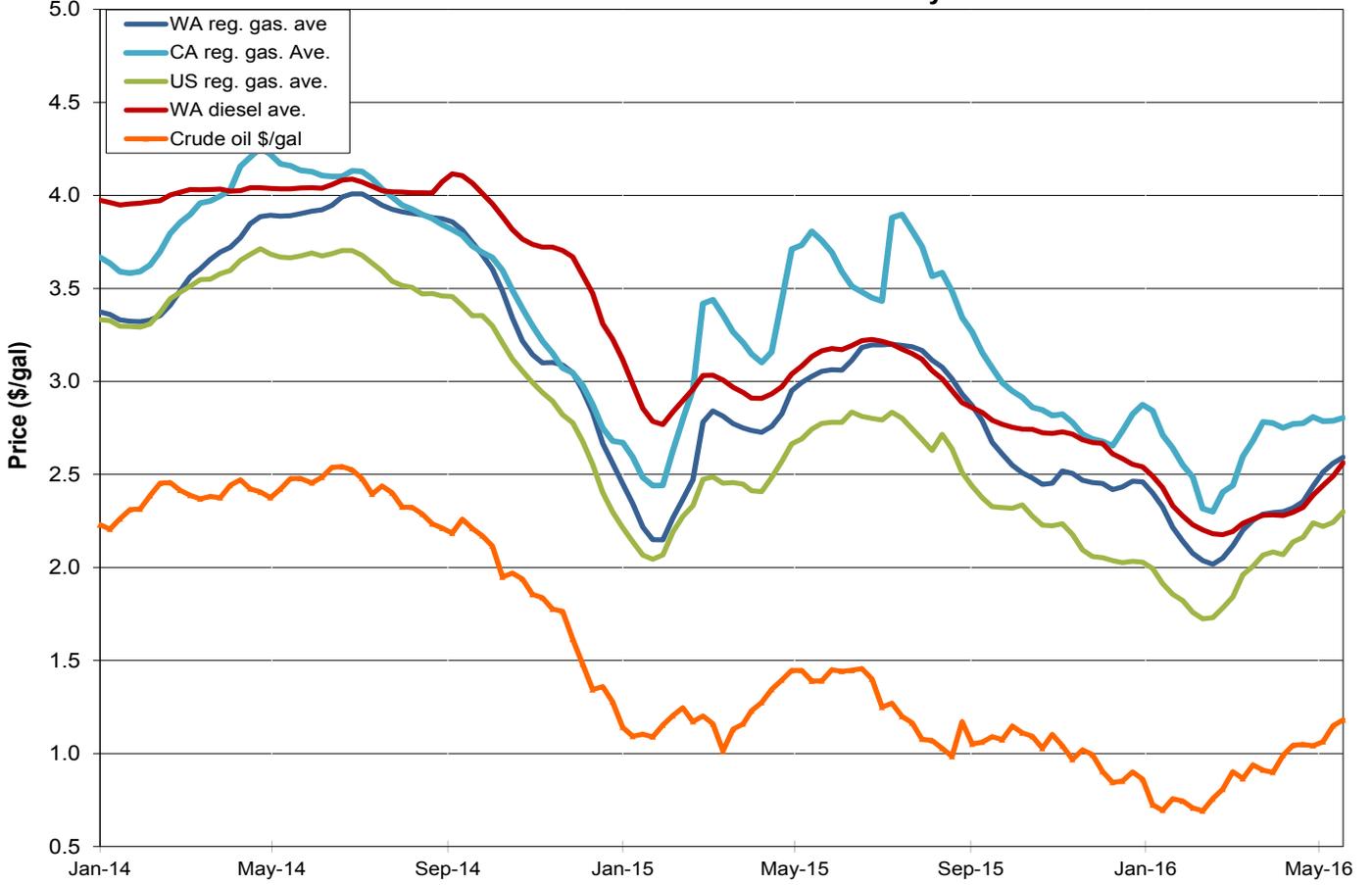
Fuels: Transportation fuel prices increased rapidly during early May. As of last week, national (average) gasoline prices were 14 cents higher and national diesel were 16 cents per gallon higher relative to the last week of the previous month: national gas and diesel were \$2.30 and \$2.36 per gallon respectively. Washington state average gasoline price for the same period were 24 cents higher relative to the previous month at \$2.59 per gallon, while diesel increased 24 cents to \$2.56 per gallon. For much of 2016 diesel prices have been lower than gasoline prices, which is somewhat atypical. New diesel refining capacity in China is the likely cause of lower diesel prices.

Natural Gas: The price for month a head NYMEX natural gas increased to \$2.07 per MMBtu. Locally, the average May natural gas spot price at the Kingsgate hub remained about the same at \$1.44 per MMBtu. Nationally, there was a moderate sized natural gas storage injection of 71 Bcf last week. Gas storage levels are 2,825 Bcf, about 37% above the 5-year storage average at this time of the year. Gas storage in the Pacific region is running 18% ahead of the 5-year average. Milder average temperatures in most of the US have resulted in record high natural gas storage levels as we head into the lower demand summer season. Natural gas demand usually peaks in January, but there is a smaller summer peak, driven by electric sector demand, as well.

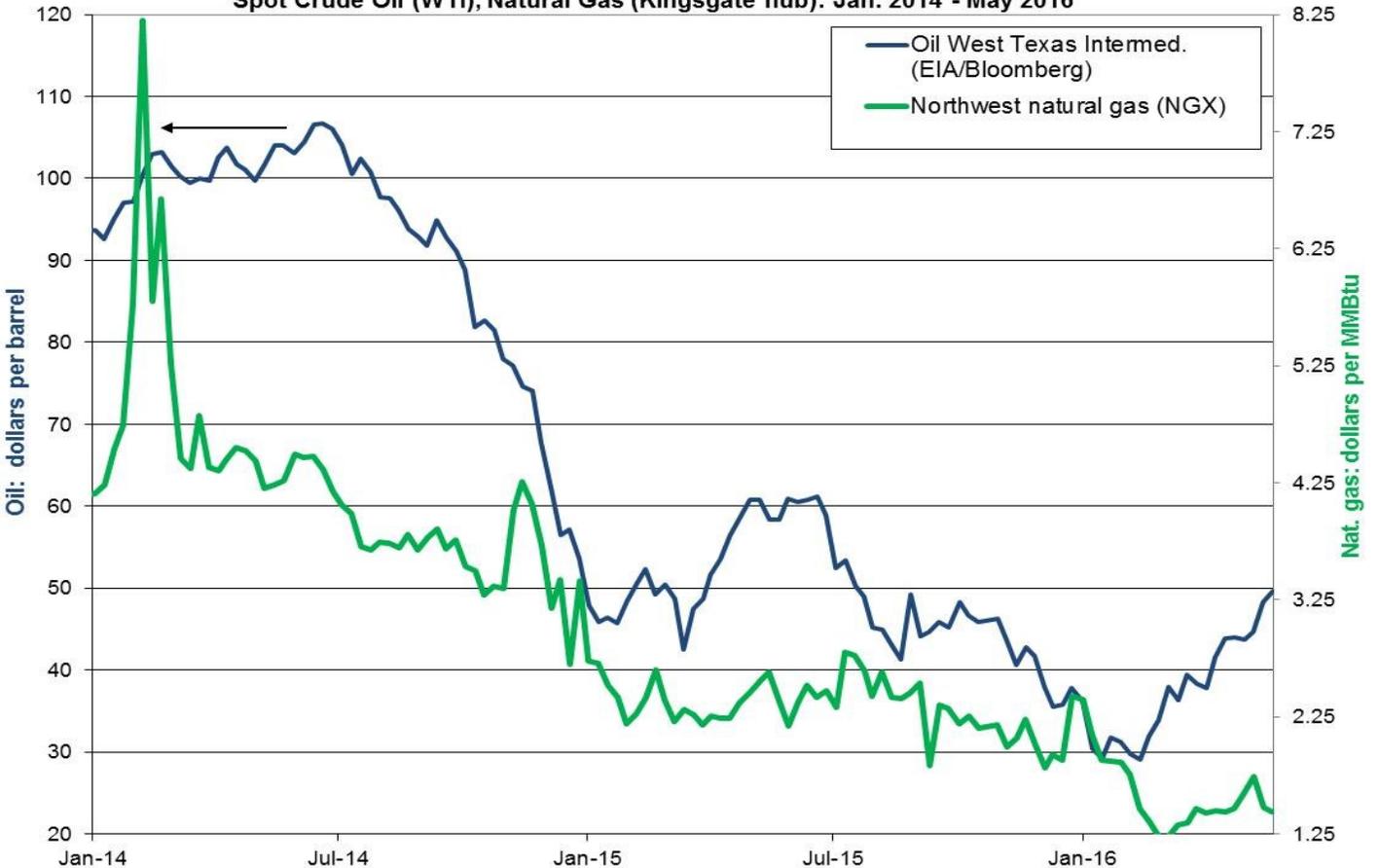
Electricity: May was a more typical month than April, but due to early snowmelt spot electricity prices in the Northwest remained low for much of May. The May average spot price was \$14.3 per MWh, about \$2 less than the previous month and \$14 less than for May 2015. Warm weather and early snow melt sent a huge plug of water down the Snake and Columbia River in late April and early May: see River Data on page 7. The other table on page 7 shows that reservoir levels at the federal dams have been drawn down below normal levels to accommodate the above normal rainfall in March and the early and sudden snow melt during April and early May.

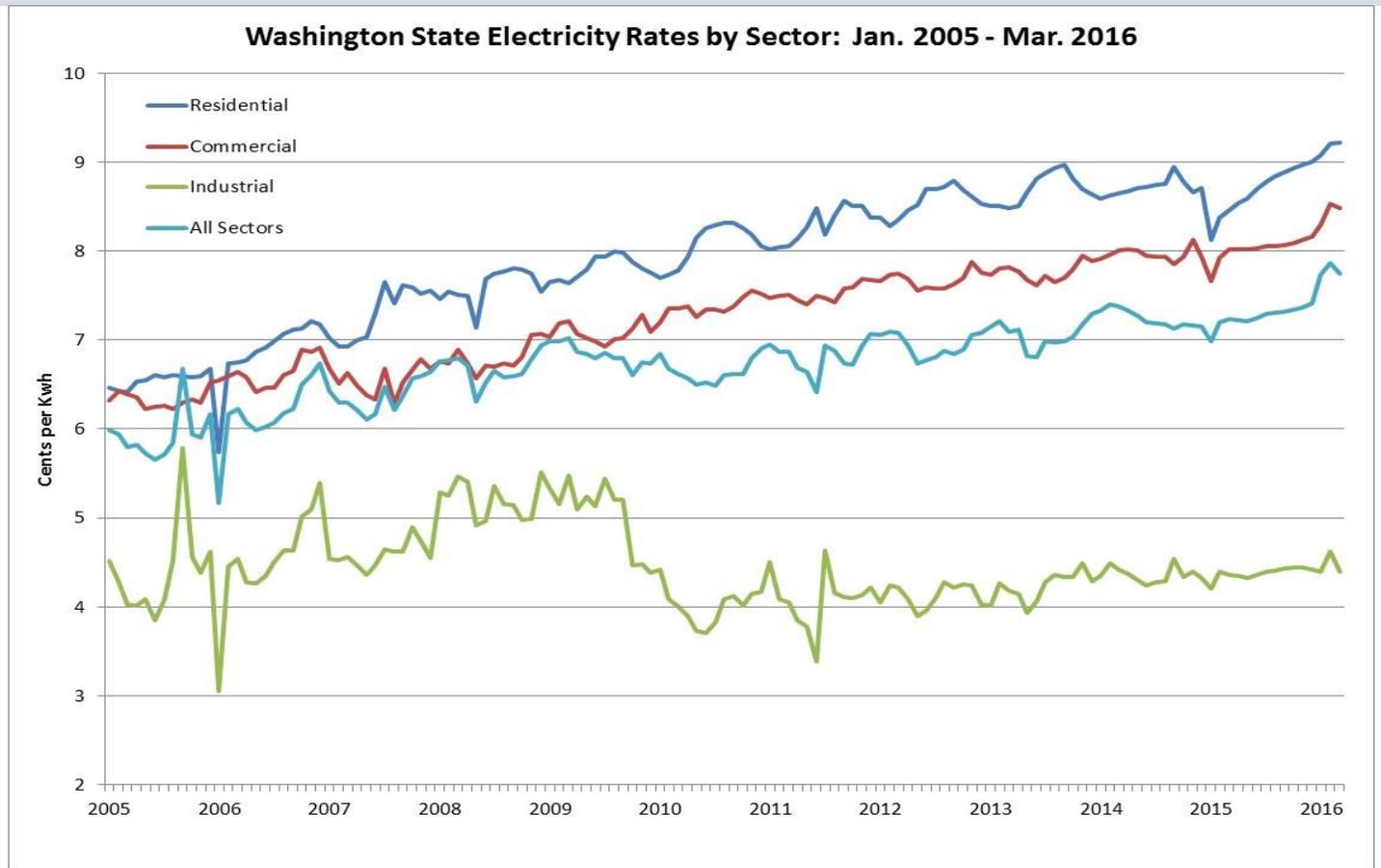
Energy Price Summary	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	8.5-18	2.8-16.8	16.3-24.8
Average Mid C price (Peak hours \$ MWh, current month)	14.3	12.1	28.2
Electricity WA Retail: Mar. (cents/kWh)	7.74	7.86	7.23
Natural gas Kingsgate spot price (next day: \$ per million BTU)	1.44	1.47	2.40
Natural gas Sumas futures price (next month \$ per million BTU)	1.57	1.42	2.32
Natural gas Sumas monthly average: Mar. (\$ per million BTU)	1.42	1.85	2.33
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	2.07	1.90	2.83
E85 (national average: \$ per gallon gasoline)	2.60	2.31	2.75
Ethanol (CBT next month contract: \$ per gallon)	1.64	1.53	1.55
Corn (CBT next month contract: \$ per bushel)	4.06	3.85	3.53
Petroleum, West Texas Intermediate futures (\$ per barrel)	49.6	44.0	58.4
Seattle gasoline price (\$ per gallon, last week of the month)	2.63	2.40	3.12
Gasoline futures (NYMEX next month: \$ per gallon)	1.58	1.46	2.03
State diesel price (\$ per gallon, last week of the month)	2.56	2.32	3.18
Heating oil futures (NYMEX next month: \$ per gallon)	1.42	1.21	1.97
U.S. residential propane price report (\$ per gallon)	NA	NA	NA
Clean Cities: Alternative Fuel Price Report, January 2016	Current US avg	Current qtr west coast	Last qtr avg west coast
Ethanol E85 (\$ per gas gallon equiv.)	3.07	3.65	3.33
Biodiesel B20 (\$ per diesel gallon equiv.)	2.99	3.24	3.08
Biodiesel B99-100 (\$ per diesel gallon equiv.)	3.91	4.03	4.15
Compressed Natural Gas (\$ per gas gallon equiv.)	2.12	2.36	2.33
Propane (\$ per gas gallon equiv.)	3.97	4.11	4.10

Retail Gasoline and Diesel Prices: Jan. 2014 - May 2016



Spot Crude Oil (WTI), Natural Gas (Kingsgate hub): Jan. 2014 - May 2016





Energy Headlines - If you only have time to read a few articles—read these.

Pacific Northwest Bill for Fish & Wildlife Hits \$757 Million. Electric Co-op Today.

<http://www.ect.coop/editors-pick/norbill-for-nw-fish-and-wildlife-hits-757-million/91984>

California Has Too Much Solar Power -- And That's a Good Thing. Motley Fool.

<http://www.fool.com/investing/general/2016/05/01/california-has-too-much-solar-power-and-thats-a-go.aspx>

What We're Getting Wrong in the Carbon Tax Debate. Grist Online.

<http://grist.org/climate-energy/what-were-getting-wrong-in-the-carbon-tax-debate/>

Thanks BPA – Alcoa Won't Idle Ferndale Smelter in June as Planned. Associated Press.

<http://q13fox.com/2016/05/02/alcoa-wont-idle-ferndale-smelter-in-june-as-planned/>

Researchers Aim to Put Carbon Dioxide Back to Work. NY Times.

<http://www.nytimes.com/2016/05/03/science/carbon-dioxide-recycling.html?ref=energy-environment>

Behind the Collapse of SunEdison, a Solar Supernova. Los Angeles Times, CA

<http://www.latimes.com/business/la-fi-sunedison-collapse-20160504-story.html>

Wind Industry Marks Strongest First Quarter for Installations since 2012. Utility Dive.

<http://www.utilitydive.com/news/wind-industry-marks-strongest-q1-for-installations-since-2012/418484/>

Court Rejects Salmon Plan, Suggests Breaching Dams. Electric Co-op Today.

<http://www.ect.coop/industry/on-the-docket/court-rejects-salmon-plan-suggests-breaching-dams/91455>

Recent Reports on Energy and Climate Change

Clean Power Plan for Existing Power Plants. United States Environmental Protection Agency August 2015.
<http://www2.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>

Analysis of the Impacts of the Clean Power Plan. Energy Information Administration, May 2015.
<http://www.eia.gov/analysis/requests/powerplants/cleanplan/pdf/powerplant.pdf>

Washington drought 2015, Dept. Of Ecology: <http://www.ecy.wa.gov/drought/index.html>

State Of The Climate Report: 2014 Was Earth's Warmest Year on Record <http://www.cbbulletin.com/434533.aspx>

42 States Are Reducing Emissions Ahead of the Final Clean Power Plan Rules <http://www.utilitydive.com/news/report-42-states-are-reducing-emissions-ahead-of-the-final-clean-power-pla/402370/>

Monthly Energy Review, EIA : <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA : <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA,: <http://www.eia.gov/oog/info/twip/twip.asp>

Annual Energy Outlook 2016 (early release) <http://www.eia.gov/forecasts/aeo/>

The Quadrennial Energy Review, Dept. of Energy
<http://energy.gov/epa/quadrennial-energy-review-qer>

The Quadrennial Technology Review, Dept. of Energy
<http://www.energy.gov/quadrennial-technology-review-2015>

US Energy Related Carbon Dioxide Emissions 2014
<http://www.eia.gov/environment/emissions/carbon/>

Seventh Power Plan, NW Council, Feb. 2016.
<http://www.nwcouncil.org/energy/powerplan/7/home/>

River & Snow Pack Info

- Observed May stream flow at The Dalles: 111% of average.
- Observed May precipitation above The Dalles: 105% of average.
- Est. 2016 Final runoff at The Dalles (Jan.—July): 104.7 million acre-feet, 103% of 30-year average.
- Estimated snowpack Apr. 74% of average.
- Federal hydropower generation in Apr. : 11,066 aMW, 2011-2015 average: 10,366 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Apr. 57%, 5-year average: 66%.

River Data

Data for May 29	Outflow (kcfs)	Ave. outflow for last 10 years (kcfs)
(Snake) Lower Granite	64.6	107
(Columbia) The Dalles	202.2	309

Clean Energy Funding Grants

The Clean Energy Fund enables a mix of projects administered by Commerce's State Energy Office. Funding will support development, demonstration, and deployment of clean energy technologies that save energy and reduce energy costs, reduce harmful air emissions, or otherwise increase energy independence for the state.

Research, Development & Demonstration Match Grants

The eligibility phase for applications to the Clean Energy Grants for Research, Development & Demonstration Match (RD&D) is going on now. Applications are being accepted through June 3, 2016. These grants match federal funds or other non-state funding sources used to research, develop and demonstrate clean energy technologies. Some guidelines have been changed since the 2013-15 program. Apply now at <https://zoomgrants.com/gprop.asp?donorid=2142>.

Guidelines can be found at <http://www.commerce.wa.gov/Programs/Energy/Office/Pages/Clean-Energy-Funds-2.aspx>

Clean Energy Grants to Electric Utilities (Grid Modernization)

These grants are used to match funding used to advance clean and renewable energy technologies and transmission and distribution control system improvements. Projects will enable integration of distributed and renewable resources and technology and increase reliability and resiliency. Only public and private electrical utilities that serve retail customers in Washington State are eligible for these grants. Commerce expects to announce successful utilities in June 2016.

Clean Energy Grants to Nonprofit Lenders

These grants match private capital used to finance revolving loans for proven energy efficiency and renewable energy technologies that currently lack access to capital. The competitive solicitation for \$9.7 million in grants closed in March 2016. Commerce expects to announce successful lenders in May 2016.

Renewable Energy Manufacturing Program

This is the newest program added to the Clean Energy Fund. It's a unique combination of financing opportunities targeted to advanced solar and renewable energy manufacturing facilities in Washington state. The Department of Commerce and the Washington Economic Development Finance Authority (WEDFA) will jointly market their respective programs: Economic Development Bonds, to be issued and sold by WEDFA, are financed with loans made by private lenders to the owners of the facilities financed with the bonds. A large interest cost subsidy would be paid from Commerce to reimburse borrowers for up to 80% of the interest payments they make on their qualifying loan. Only projects approved by WEDFA for economic development bonds are eligible for the interest rate reimbursement from Commerce. Interested parties should contact WEDFA for details on this newest Clean Energy Fund program.



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